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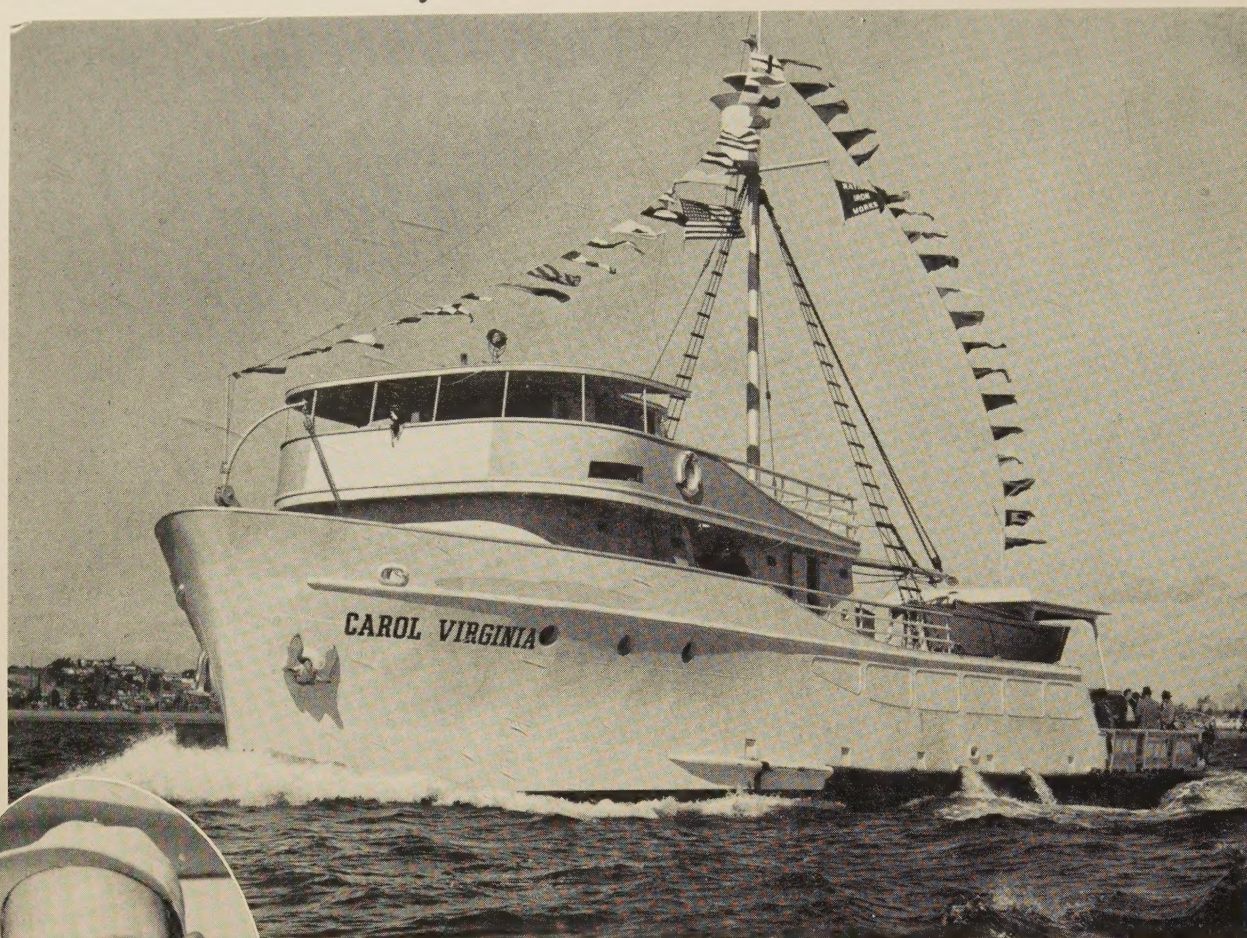
NOVEMBER 1951



Is the Sun Setting on the Tuna Industry?

(See "Death Throes," Page 14)

NATIONAL Designed NATIONAL Built



All-steel tuna clipper *CAROL VIRGINIA*, built by National Steel and Shipbuilding Corporation for George A. Stevens, Garnet W. Stevens and Associates.

Capt. George A. Stevens is one of the younger generation who has gained leadership in the tuna fishing industry. He is following in the footsteps of his father, John H., who retired in January of this year after more than 50 years service with the San Diego fleet.

George, now 39, came to San Diego from Long Beach, his birthplace, in 1927. He made his first trip in 1930 aboard the small tunaboat *San Antonia*, and later joined the crew of the *San Rafael*. From 1932 to 1943 he worked for a wholesale grocery firm, then returned to the sea on the *Dominator* under Captains George Soares and Joe Madruga. In 1946 he was made skipper of that vessel.

George, his brother Garnet (better known as Steve) and associates, teamed up to build the *Carol Virginia*. With George as captain and Garnet as chief engineer, this trim clipper was launched at the National Steel yards in January, 1949, and made her maiden voyage two months later.

With his wife, Loma, and their two children, the Stevens reside at 5819 Hardy Ave., College Park. The youngsters are Noel James, 13, a student at Woodrow Wilson Junior High School, and Muriel Donna, 17, a senior at Herbert Hoover High School.

BRIEF SPECIFICATIONS:

Length, Over-all	115'3"	Fuel Oil Capacity.....	37,500 gal.
Molded Beam	27'0"	Cruising Range.....	12,000 miles
Molded Depth.....	13'2"	Fresh Water Capacity	4,200 gal.
Molded Height to Raised Deck.....	19'11"	Lubricating Oil Capacity	1,300 gal.
Fish Capacity.....	220 tons	Crew's Quarters.....	14 men

MAIN ENGINE: Atlas 6-cylinder Imperial Diesel, single acting, direct reversible, 4-stroke cycle, 13" x 16", 315 RPM, supercharged to provide 550 BHP.

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HULL: The "*Carol Virginia*" features an electric arc-welded steel hull, with a raked stem and a modified tuna vessel stern. Shell plating is 5/16" steel. Floors are constructed of 5/16" steel plate in the engine room and wherever floors are oil tight. Other floors are 1/4" plate. A 5/16" center vertical keel is provided.

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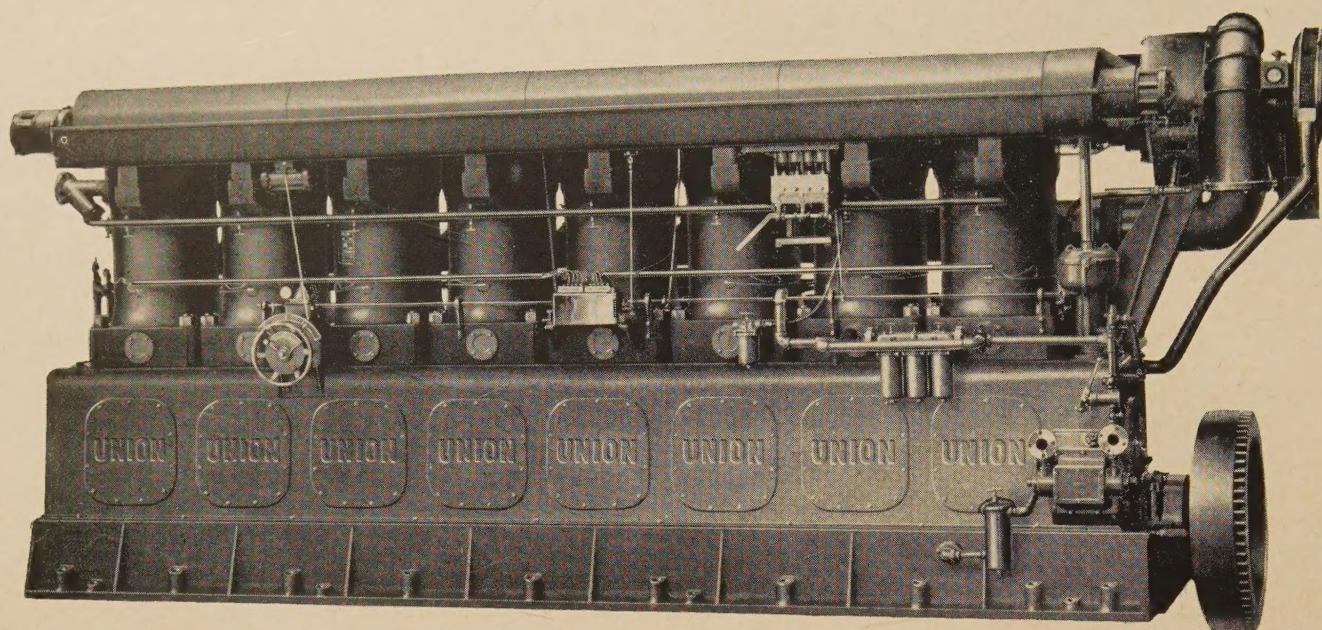
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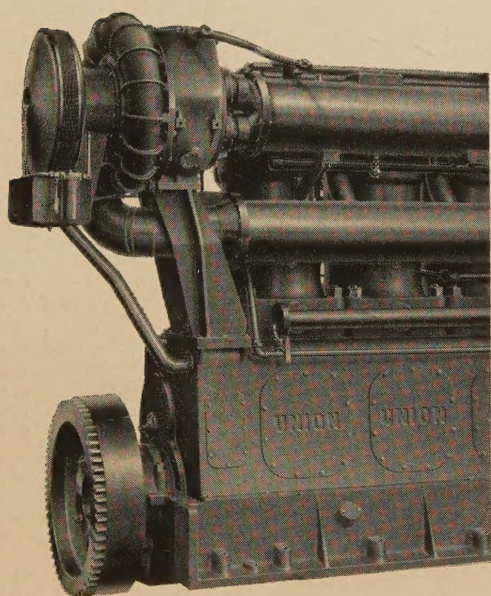


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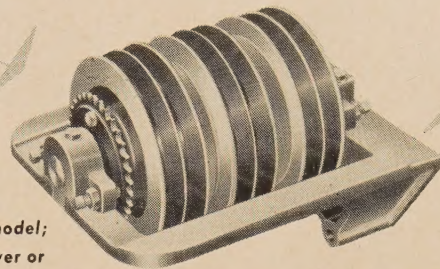


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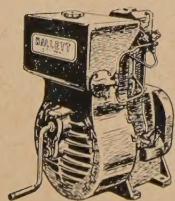
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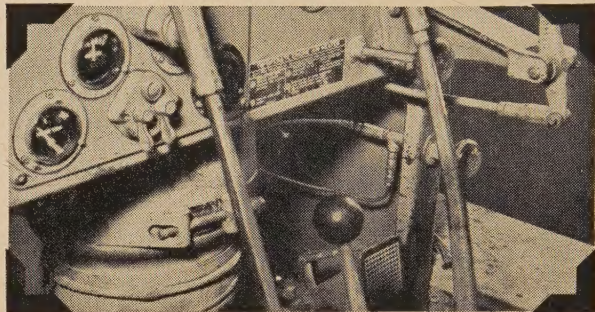
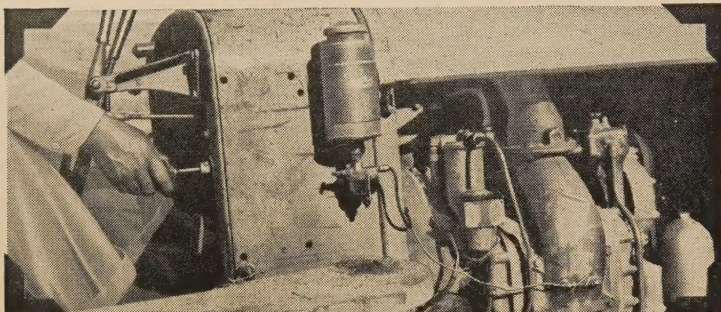
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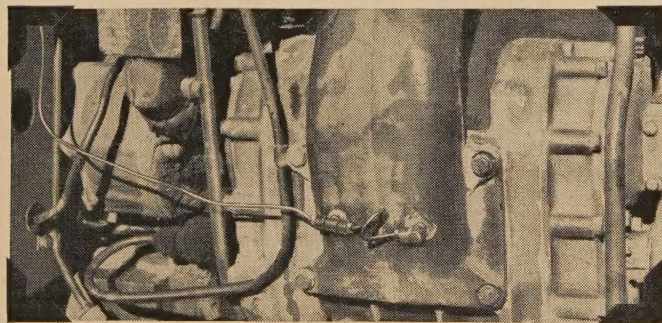
PRODUCT	Chevron Starting Fluid
UNITS	A. C. diesel engines ^{HP-7} tractors
CONDITIONS	25° below zero weather parked in open shed
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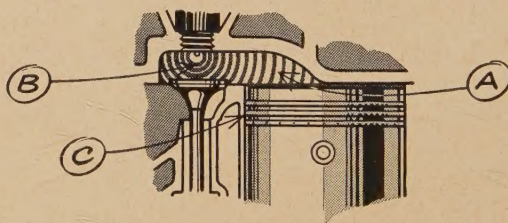
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PAN-AMERICAN *fisherman*

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Volume 6 Number 4

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COVER

Sundown photo taken by Gene Souligny at "B"
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ABOUT THIS ISSUE:

WELL, we've got another treat for you this month. It's another article, in fact, by that excellent authority and fine writer, Dr. Wilbert M. Chapman, Director of Research, American Tunaboat Association, San Diego, California. Dr. Chapman sets out to show just what advantages may be gained from a steady, or at least a fairly steady diet of tuna, and he does a magnificent job of it. But here's something to make you wonder, perhaps. Tuna is better for you, says the astute Doctor, when eaten cold, with crackers, and perhaps some hot coffee to wash it down. Here's a sample of his article, and, after reading this, we know you'll want to consult page 12 and finish it:



"Take a can of tuna, preferably California Light Meat Tuna. Turn off the lid, and invert the tuna meat onto a little plate.

"Break a small piece of the meat off one of the larger chunks. Smell the delicate aroma of the tuna. Pop it into your mouth and savor the taste. Don't take too big a piece for the test and don't be too hasty in swallowing it. Roll it around on your tongue a couple of times and give every taste bud an acquaintance with the luscious flavor.

"There is the test. If you don't reach back to the plate for a bigger piece of tuna immediately, don't bother to read the rest of this article because I'm going to tell you how reasonably priced tuna is as a food and how it fills so many of your nutritional requirements. But there is no use trying to tell a person how fine a buy a food is and how good it is for the whole family if the person doesn't like the flavor, aroma, and appearance of the food.

"If you have any of the can of tuna left on the plate when you finish reading this article I'll be surprised. Tuna doesn't need to be sold. It will sell itself to any customer who will take a bite of it. And the best way to eat tuna is cold, fresh out of the can, with no garnishment

of any kind. Just a few crackers and some coffee and you've got a thoroughly satisfying lunch.

"The rich, nutritional qualities of tuna are no accident. The ocean carries in solution all of the elements that compose the earth's crust. The trace elements are there in abundance just as are all the elements which occur in the soil. Nothing that is needed to support life is absent from ocean water.

"The soil can become exhausted by heavy cropping. Some soils are naturally deficient in certain elements and the livestock that is fed on the forage produced in such soils are deficient in these nutritional aspects also—as are the people who live there if they do not bring in other food from the outside.

"Very tiny quantities of certain of these elements are needed in the human diet, but if they are not there the body suffers. Iodine is necessary to the normal functioning of the thyroid gland. Without traces of manganese in the diet the body simply doesn't grow. Insulin, the hormone of the pancreas gland which prevents diabetes, requires the presence of tiny quantities of zinc in the diet. Without traces of copper in the diet the body cannot convert the simple salts of iron into hemoglobin, which is the red of the red corpuscles which carry oxygen through the body. Of course, the iron has to be present in the food also. Traces of fluorine are needed in the diet, too, for proper tooth and bone building. Some of the vitamins essential to man's diet contain sulphur in their molecules, as does the amino-acid methionine which is essential to man. Potassium and magnesium function in the formation of nearly every cell in the human body. The list could be lengthened."

Such is a cross-section of Dr. Chapman's article, which we think you won't want to miss. As we said, it's on page 12.

High Political Analysis From the Lemon Belt

Late last month this magazine was treated to an editorial phenomena, of a nature to cause even the most hardened journalist of this present day to gasp in surprise and, in a sense, perhaps in astonishment. This particular literary gem was an editorial written up by an employe, or possibly the owner himself, of the estimable Riverside, California *Press* newspaper, on the subject of the tuna import crisis. The *Press*, as everyone knows, is a paragon of virtue and wisdom, but what this page at least did not know, was the fact that America still has publications given over to grass-roots internationalism.

What a surprise!

How pleasant it is to know, in fact, that there still exists in specialized America some village journals which, in the tradition of the late Kansas meetin'-house editor, William Allen White, are qualified to speak authoritatively on any and all cosmopolitan subjects.

In short, the *Press*, the Lemon Belt's Champion, has pointed out not only firmly but conclusively what should be done about the tuna import situation. Charging into the fray with all editorial guns blazing, the Citrus Man's Friend has left no lemon unturned in quashing the tuna industry's unreasonable demands for a tariff on raw fish.

Dubbing industry spokesmen a "small, articulate pressure group," this hardy offshoot of Gutenborgianism, ploughed ground, cabbages, cows and lemons closes its arguments in favor of Japan with a remarkable crop of advanced thinking.

"If Congress decides questions like the tuna tariff on the basis of the national interests," it brays, "it will tell San Diego's unemployed tuna fishermen to get jobs at Consolidated-Vultee. They're needed there."

Now, how do you like that, tuna people? Did you think perhaps that you could put one over on the sagacious,

intellectual, Voice of the Lemon? Did you imagine, in your wildest dreams, that the Eyes and Ears of the Lemon World would permit you to protect your industry against the encroachments of cheap foreign labor, low tax impositions, and cut-rate prices? If you did, then you're quite mistaken.

Actually, you are antagonizing Japan to a point wherein that country is liable to start buying American products from someone else, maybe lemons included. Moreover, if you tuna people don't cease your efforts soon in attempting to block Japan from taking over the American tuna industry, then Japan may become ripe for Communist plucking. Are you not ashamed? You should be. Look how far you've fallen, due to your stubborn insistence on a protective tariff, in the eyes of the country's most outstanding lemon journal.

The best you could do to redeem yourselves now, is to quit insisting on that tariff. Do you think any honest lemon man, to say nothing of such a monumental example of gold-plated journalism as the Lemon Gazette, would be guilty of such thinking in the matter of his own industry? Of course not.

True, some time ago the government forced a distasteful subsidy on the lemon man and, at the same time, or shortly thereafter, compelled him to accept a protective tariff on his product of about 20 per cent. But that's beside the point.

Certainly, the real red-blooded lemon man would rather go to work for Consolidated-Vultee than be exposed to any further governmental protection of this nature, and that goes for self-respecting lemon editorial writers, too. This page knows only too well that, were it not for the ethics involved in free trade, the majority of lemon journals would shut up shop rather than think of accepting advertising revenue derived inadvertently from government subsidies and 20 per cent tariffs.



The GLOBE

An International News
File compiled by
FOREIGN BUREAU
of
Marine Press Association

Tokyo, Japan.—Salt Water Fisheries: A favorable herring catch has resulted in a good 1951 production of dried herring. Squid fishermen have also had a very successful season. Salmon, mackerel, and trout production are also estimated above average. In July, large catches of salmon and trout were reported from the East Coast, and a bumper mackerel catch. Hokkaido's 21 salmon and trout canning factories which will can almost 9 percent of the total Japanese catch, will pack about 160,000 cases of 8 dozen cans each. This will bring the Hokkaido pack to almost three times that of 1950. A poor crab catch this year will probably reduce the predicted production of 80,000 cases of this product to 15,000 cases.

Only \$20,000,000 (US\$55,556) worth of canned seafoods were exported from Japan during the first six months of 1951 because of the poor crab catches, and high internal prices and operating costs. On July 17, however, 32,000 cases of canned salmon with a value of \$260,000,000 (US\$722,222) were shipped to Dublin. Exports of canned trout are expected to be about 100,000 cases during 1951.

Refrigerator ships have reduced spoilage and have helped fishermen maintain prices. However, reports indicate that large fishing companies now guarantee fishermen a minimum monthly wage of only \$5,000 to \$6,000 (US\$13.90-16.70). Fishermen averaged well over \$10,000 (US\$27.78) per month in 1947 even though the company received 60 percent of the value of the catch and the fishermen 40 percent.

Whaling: The largest whaling factory-tanker vessel ever built in Japan has recently been completed at the Kawasaki Dockyard in Kobe, an August 17 report from Tokyo points out. The 17,000 gross metric ton ship is reported to have facilities for processing 37 whales daily.

St. Johns, Newfoundland.—Newfoundland Fisheries Board preliminary data show a slight increase in production but a drop in holdings of fillets and dressed groundfish by frozen fish producers for the first six months of 1951 as compared with the same period in 1950, American Consulate stated in a July 25 report from St. John's.

Oslo, Norway.—Exports to the United States of frozen Norwegian fish are expected to amount to US\$1,960,000, according to a report of a director of the Norwegian Frozen Fish Association published in the August 15 issue of *Fiskaren*, a Norwegian trade paper. Established in 1946, the Association has now overcome its early difficulties. Two Norwegian steamship lines have equipped a number of their fast vessels with refrigerated space so that transportation facilities for frozen fish are now adequate. The Association has established subsidiary companies in the United States and has stocks of fish in nine cities. A sales organization has been developed and the products are reported winning acceptance in the United States.

Securing sufficient raw material is the greatest problem at present. With the organization available, it

should be possible to sell from US\$2,800,000 to US\$3,500,000 worth of frozen fish annually to the United States, according to the Association. Exports began in 1948 with a value of only US\$70,000, and consisted of fillets of wolffish (catfish), cod, haddock, halibut, and ocean perch (rosefish). Cod fillets are not the most important fish product as many believe.

The Association does not export to the United States alone, although it is and will continue to be the most important market. About 40 percent of the Norwegian frozen fish exports go to the United States with the balance spread among a dozen countries. For example, considerable pollock fillets go to Europe. There are contracts with Austria, Czechoslovakia, Israel, and Italy. There has been no difficulty to date in selling all that has been produced. In fact, at present it is difficult to fulfill the contracts, according to reports.

Several thousand tons of frozen tuna are being shipped to Italy in specially-built boats. Tuna are a difficult fish to handle since they are fat and are caught in the summer when they spoil easily. There is a large demand for tuna in Italy, both frozen and canned. A large amount of frozen Greenland halibut has been marketed in Europe and the Association is attempting to develop a market for frozen fish in India.

Vigo, Spain.—For the first time in years, Spanish fish canners in the Vigo district have been able to operate without interruption during the entire month of July, an August 8 American Embassy report from Madrid state. This has been made possible by hoarding tin-plate stocks in expectancy of seasonal runs of fish suitable for exporting. The supply of sardines, the principal fish used for canning, continued scarce, but canners have been actively engaged in canning albacore and anchovies which have good markets in the United States and other countries. Over 2.5 million pounds of fish were purchased by canning plants in the Vigo area during July.

The September 1950 export rates established by the government and the permission granted the packers to retain 20 percent of the foreign exchange earned by their shipments for investments in machinery and supplies has resulted in a higher level of production than in the preceding year. Raw-material shortages, high production costs, and the loss of former markets still confront the industry with many problems. The major problem is still finance, and the industry is practically dependent on bank credit. While the interest rate has not increased, banks have been overcautious in granting long-term loans.

The outlook has become brighter, however. Tin-plate stocks have improved, and the possibility of obtaining additional American tin-plate under the U. S. loan to Spain has made the packers very optimistic.

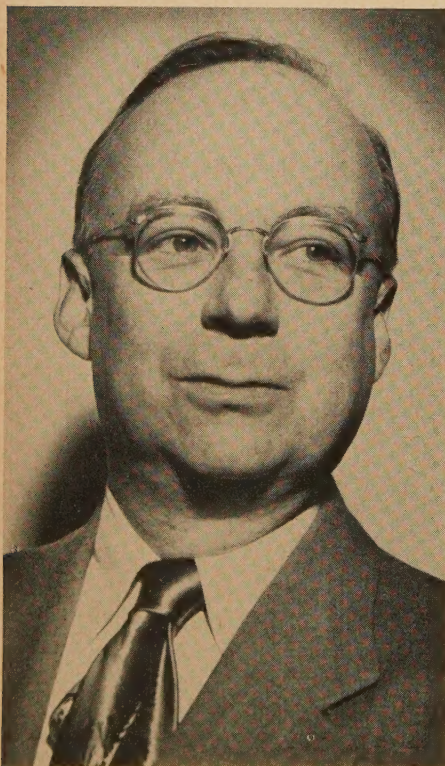
Canning establishments in the Vigo area purchased more than 8,100 metric tons of fish during the first six months of 1951—some 25.7 percent more than the same 1950 period.

"Root, Hog, or Die!"

PRESSURE & DISPATCH

Snowball:

Never before in its long history of trial and tribulation had the Congress been subjected to so much hullabaloo over a commercial fishing incident. The hue and cry for relief or Congressional scalps had started early in September. Dr. Wilbert M. Chapman, Director of Research and Harold F. Cary, General Manager, of American Tunaboat Association, San Diego, California, had blown off the lid by handing Howard Morin, a *Union* newspaper waterfront reporter, several pages of statistics. The story that came out next day informed 17,000 fishing people, of one station or another, that foreign-caught fish, duty free, was glutting the tuna fishing market, and that they were in danger of eventually losing outright, or cutting down, the scope of their livelihood.



Seymour E. Francis

... he rooted.

The general reaction was that Congress and the State Department had dished out a hell of a raw deal to the fishing industry in general, and that nothing in the way of relief could be counted on, now or ever. The State Department had consistently been against disrupting current trade agreements with foreign countries friendly to the United States, and that Congress had rejected so insignificant a relief as a quota system on importations of foreign-caught fish several years before. Nothing but double-talk, therefore, could be expected from either group. But a surprise was in store for the pessimists; one that had not been counted upon, and one that proved to the satisfaction of many that American women swing a wicked axe, in the main.

Mrs. Mary Rogers' axe was double-bitted and sharp. Armed with the imposing title, "Tuna Industry Emergency Committee," she collected a number of the tuna industry's distaffers, set up an office, borrowed and bought a flock of typewriters, pens and pencils and settled down to blizzard Congressional leaders with messages of protest. The move snowballed. Before the month was out, more than 50,000 letters had found their ways to various Congressional desks in Washington, D. C.'s marble halls. But that was only a starter. In October, upwards of a hundred thousand letters and telegrams followed the September consignment, and, to this array of correspondence, was added more mailbags from Lester Balinger's powerful Fishermen's and Cannery Workers Union, AFL, George Baker and Hugh Maxwell's Tuna Clipper Engineers Union, AFL, Charles White's San Diego Commercial Fish Boat Owners, Incorporated, and from numerous minority groups. Adding to the headache for the lawmakers was a big protest parade in San Diego by large clippers and small boats, and the persistent petitioning of various business and civic leaders, backed by the dignified beefing of both of San Diego's big newspapers. The entire uproar, of course, could have blown over and died the death of the proverbial rag doll, except for an important development.

Strategy:

Harold Cary and his burly, brilliant colleague, Wib Chapman, were a hard combination to beat in any kind of a fisheries fight. Chapman, a brilliant scientist, knew the ropes in Washington; previously he had been Special Assistant to the Undersecretary of State for Fisheries back there, and he hadn't been asleep on the job. He provided the insight into Washington politics. Cary, detail-minded and statistics-crazy, had ammunition to burn. Collectively speaking, the industry, faced with a fight, had racked up the first knockdown; Congressional leaders were slap-happy from the barrage of protest letters, and the Cary-Chapman team had plenty of punch to back up the literary attack. Moreover, the overall combination had plunged Rep. Clinton D. McKinnon of San Diego, Rep. Cecil King of San Pedro, California, and several other politicians into the mess waist-deep. McKinnon provided the clue to the next, and cagiest, move of the year.

"Congressmen from heavy machinery areas will buck this," he warned. "They want a brisk foreign trade so foreign countries can require dollars with which to buy American heavy machinery."

Loophole:

Cary and Chapman didn't need to be hit with a club. If, in effect, "heavy machinery" Congressmen were going to buck, let them. There was plenty of support to be had from smaller representatives; those who, by virtue of their small industries were weak, and who could be faced with a similar dilemma if the fishing industry was allowed to go bankrupt. *If these men could be shown where a dangerous precedent was being set, they might go to bat for the tuna industry.* But how to awaken them to the fact. The answer obviously was through excitement of public sympathy. That meant getting through to radio, newspapers, magazines and other publicity mediums, and that meant setting up a publicity department, headed by an expert public relations man. Early in October they carefully looked over the field of agencies engaged in the business, and finally called in Tom Arm-

strong, President of Armstrong-Schramm Advertising Agency of San Diego.

"Root, hog, or die!":

Wiry, Bull Durham-smoking Tom Armstrong's business had practically grown up with the tuna industry. A former editorial executive on the staff of the old *Union*, he had set up shop originally as a publicity office; later he had added advertising to his layout. He was well acquainted with San Diego's industrial aches and pains, including those of its commercial fishing, and, when Cary and Chapman asked him to bludgeon the nation's papers and radio stations, its magazines and house organs, he jumped at the chance. Any success in causing sympathy in the breast of John Q for the tuna industry, especially if such action was instrumental in bringing home the bacon, wouldn't particularly damage the Armstrong-Schramm reputation for getting things done. The bargain having been struck with Cary and Chapman, therefore, he returned to his Spreckels Building office, and summoned to The Presence Seymour E. Francis, his Number 1 publicity general. "I assume that you still read newspapers occasionally," he said. "If so, you're aware that the tuna industry is in bad shape. It needs public sympathy. You're to get it gobs of public sympathy. The industry is in the position of root, hog, or die."

Gobs:

A newspaperman for 25 years, Francis wasn't in the dark on how to proceed. A former editor on both the *Chicago Sun*, and the Indianapolis *Star* and now defunct San Diego *Journal*, he merely reverted to his reportorial days. This meant covering the waterfront from one end to the other, interviewing commercial fishermen, clipper owners, canners and the rest. Then he camped in

the Cary-Chapman offices for a week. Then he got out his typewriter and went to work. His record made that of the majority of big time publicists look sick. Within two weeks he had a clip book showing newspaper prints of more than 2,000 articles. These included very nearly every paper in port cities in the United States. The breakdown:

Acme photos, *United Press Association* features, straight features, straight news, radio features, background; all of the nation's commercial fishing trade journals, canning magazines, grocery publications, *Associated Press Association* features and news; *Life* magazine, *Time* magazine representation, radio stations on the West Coast, *Wall Street Journal* features.

Stories developed for Coastwise distribution included those on the Tuna Industry Emergency Committee, explanations of the crisis, suggested solutions (editorials); stories on local hearings. Background information included excerpts from the voluminous Cary-Chapman reports, reprints of feature and full-page pictorial in the San Diego *Union* (reprints to all Congressmen); and personality stories on various fishing figures. Radio interviews included fifteen minutes of advertising-public relations-publicity-sales promotion analysis on San Diego's *Voice of the Fisherman*.

Sympathy:

Possessor of a fast-moving writing styles, Francis was generally conceded as being also a first-class news head and editor. Long experience had taught him what editors wanted to print; he gave it to them, and in such "slant" that Armstrong, as the month neared its end, had got at least a good portion of the gobs of sympathy required. Letters began reaching Congressmen from their

own constituents, suggesting action on the tariff measure. Then Cary and Chapman grabbed up Francis' ball, and began running with it. The rest is history.

Record:

Leaving Chapman to run the store, Cary went to Washington, where, backed by an overwhelming public support, coaching and hard work by California Congressmen, his stubborn persistence soon bore fruit. The House approved a three-cent-a-pound duty on tuna, and tossed the measure to the Senate. That body adjourned before getting around to decisive action on October 20. But the proceedings, all the way through had set a record for speed, at least in action of its kind. When Congress convenes in January, the tuna tariff measure is assured top priority in Senatorial considerations. It looked as though an industry had been salvaged, although never again could it stand such a costly jolt. A \$65,000,000 industry had been badly crippled.

STEEL HAND—VELVET GLOVE

Conference and Canned Tuna:

A great many of the nation's leaders received a unique reminder that labor was to be considered in the tariff suggestions on foreign-caught tuna. The tip-off came in the form of canned tuna, carrying a label announcing the existence of the Tuna Clipper Engineers Union, AFL. But that wasn't the only reminder. Last month, in attendance at the Machinists Conference in Santa Monica, were George Baker, General Manager, and Hugh Maxwell, President of TCE, respectively, who saw to it that proper displays garnished the lobby of the hotels, pamphlets put out by the organization got into all hands, and the word got around. Result: Unanimous backing of the powerful West Coast Machinist Union involving the tuna tar-



Spread

San Diego, California, is not the only place to be hit by the tuna importation dilemma. This scene shows the Los Angeles mess.



Harold F. Cary
... To Washington

iff, including scores of telegrams to those high up, and a resolution to the complete effect that the MU was also in the fight.

EXPANSION AND APPOINTMENT

National Cannery:

Berkeley civic officials gave official welcome to the new half million dollar research center of the National Cannery Association at formal flag-raising ceremonies late in September.

The new building was hailed by Mayor Lawrence L. Cross as an important addition to the food technology facilities.

ties of the nation and to Berkeley's progress as a growing community of scientific activity. The building has been occupied about a month and was formally dedicated October 12 when some 600 canning industry executives from all parts of the country will attend.

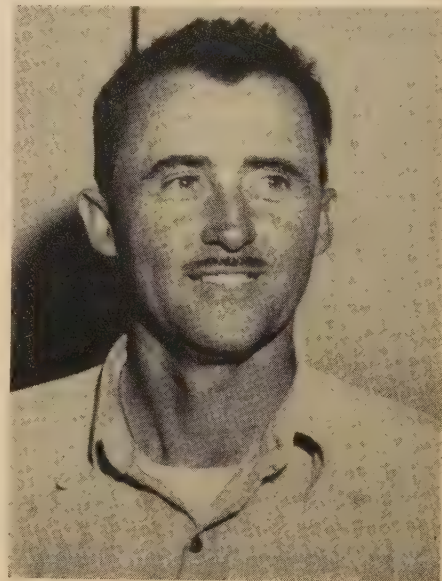
Besides Mayor Cross; members of the City Council, the executive committee of the Berkeley Manufacturers Association; William J. Norton, President, and Weldon E. Vance, Assistant General Manager of the Berkeley Chamber of Commerce, comprised the civic welcoming party.

They met in the morning at the new building at 1950 Sixth Street where they heard reports about the purposes and programs of the new research unit from Dr. J. Russell Esty, its director; H. E. Gray, prominent San Jose canner, chairman, and M. E. Brooding, of the California Packing Corporation, San Francisco, of the committee of canners that planned the building and directed its completion; Norman L. Waggoner, of the Santa Clara Packing Company, San Jose, chairman of the committee planning the dedication events; Nelson H. Budd, Director of Information at the Washington, D. C., headquarters of the National Cannery Association; Dr. Ira Somers of the staff of the new laboratory; and M. A. Clevenger, executive vice president of the Cannery League of California. The civic party met the laboratory staff and inspected the facilities of the new laboratory.

Shortly before noon, a patrol from

Berkeley Scout Troop 50 raised the flag for the first time on the new building, in the presence of the laboratory staff, the canning executives and civic officials. The ceremonies were concluded with a lunch at Hotel Durant, under sponsorship of the Chamber and Manufacturers Association, where Mayor Cross made his statement of welcome to this important addition to the Berkeley community.

The new laboratory is conducting such important work as improvement in canning processes, development of food standards for the protection of the consumer, furtherance of efficient methods of plant sanitation, and solution of the



Charles White
... Pest at the Pentagon



Hash and Re-hash

Hugh Maxwell, (left) President, Tuna Clipper Engineers, talks over union-canned tuna promotion with George Baker, Business Representative.

many technical problems involved in production of processed foods of the highest nutritional value. Its modern facilities include bacteriological, chemical, micro-analytical, nutrition, sanitation and engineering units. The National Cannery Association was the first trade association to establish research laboratories to work on the problems of its membership in 1913 during the formative years of the organization. Besides the West Coast unit in Berkeley it maintains similar laboratories at the national headquarters in Washington, D. C., and in Seattle, Washington.

Newcomer:

Dr. Howard L. Stier, professor of agricultural marketing and head of the state department of markets at the University of Maryland, will join the staff of the National Cannery Association here in October as Director of the Division of Statistics.

Dr. Stier's experience qualifies him for the problems with which he will deal in his new position. He not only has had experience in the field of sta-

tistics for a period of 18 years but also is thoroughly trained in horticulture and agronomy, of particular importance in the understanding and analysis of the various problems of fruit and vegetable canning with which he will be working in the Division of Statistics.

His research work and other studies at the University of Maryland, for which he was rewarded with M.S. and Ph.D. degrees, dealt largely with the scientific problems of fruits and vegetables. His training in statistics has been in the analysis and interpretation of agricultural data.

During World War II, from June, 1941, to August, 1945, Dr. Stier was chief statistician of the QMC and chief of the statistics branch, Office of the Quartermaster General, U. S. Army. In this capacity he was a prime factor in the compilation of a weekly report to the Quartermaster General and the Chief of Staff which encompassed all phases of supply activity, and was responsible in large measure for the coordination of all QMC sections. For these services, in which he served as a lieutenant colonel, Dr. Stier was awarded the Legion of Merit.

Following the war, he returned to the University at College Park, Md., as professor of agricultural marketing, engaged in research and statistics in economics and marketing, and as head of the state department of markets, with work in agricultural extension.

Dr. Stier has contributed many technical papers on plant physiology and horticulture and numerous articles in the fields of statistics, economics, and marketing. He also has planned and supervised preparation of numerous special reports, including staff studies, management reports, statistical manuals and yearbooks.

At the 1950 convention of the National Cannery Association, Dr. Stier presented a paper, "Trends and Relationships in the Marketing and Consumption of Sweet Corn," at a special meeting of corn canners.

DROPS OF WATER . . .

. . . Grains of Sand:

Marie Martin was willing to admit that her business was a small one; that her efforts might not amount to much; she just felt that fellow San Diego business people should stick together when economic danger threatened. So she went to the expense of ordering circular cardboard plaques made, to be worn by each of her waitresses at the Mayfair Cafe, near the corner of 12th and Broadway, in San Diego, California. She had a large cardboard sign painted, too. The messages read:

"To aid in the promotion of our third industry this cafe will serve only San Diego-packed tuna."

ACTIVITY IN WASHINGTON

Salmon and Clams:

Site of the proposed \$400,000 Elokomin river salmon hatchery, seven miles northeast of Cathlamet, was inspected by Department of Fisheries engineers last month, in preparation for drafting work on plans and specifications. The 20-pond station will be the fourth constructed with federal money under the Lower Columbia river fisheries development program. One already is in operation on the Klickitat river. Eggs will be taken at the Toutle river hatchery east of Castle Rock this fall and the first fish will be reared there next spring. The Cowlitz river hatchery near Packwood also is scheduled for operation by mid-1952.

The Elokomin hatchery will be similar in design to the new Cowlitz plant. With its 20 rearing ponds, it will be able to hatch and rear about 2½ million chinook salmon for one to four months, and 700,000 silver salmon for a year.

Bids on Elokomin will be called early in 1953, with completion scheduled for the fall of the same year.

The Lower Columbia river program, designed to compensate for damage done to upriver salmon runs by federal hydroelectric and reclamation projects, con-



Dr. W. M. Chapman
... Stayed in the store

templates a total of 12 hatcheries on Washington tributaries of the Columbia by the end of 1957, provided funds are made available on the current time schedule. The Department of Fisheries already has older hatcheries in operation on the Kalama and Lewis rivers.

The inspection group, which included Marshall Thayer, supervisor of the Lower Columbia river development division, and Russell K. Jones, assistant supervisor of construction, also visited the site of the proposed Nemah river hatchery.
(Continued on page 26)



Pressure

Owner and staff of Mayfair Cafe, San Diego, California. (See story bottom of page). Left to right, Glen Van Fleet, Del Buchanan, Jo Traywick, Irene Slinger, Cathie Langheim, John Mitchell, owner Marie Martin.



Preparation

Expert packing is heavy factor in quality of tuna. Photo, interior of Van Camp Seafood Company plant, Terminal Island, California.

Take a Can of TUNA!

Here, in simple, easy-to-read prose, is a science article written by an internationally-famous biologist. If you are interested in what tuna fish amounts to as a food, you won't want to miss it!



TAKE a can of tuna. Preferably, California Light Meat Tuna. Turn off the lid, and invert the tuna meat onto a little plate.

Break a small piece of the meat off one of the larger chunks. Smell the delicate aroma of the tuna. Pop it into your mouth and savor the taste. Don't take too big a piece for the test and don't be too hasty in swallowing it. Roll it around with your tongue a couple of times and give every taste bud an acquaintance with the luscious flavor.

THERE is the test. If you don't reach back to the plate for a bigger piece of tuna immediately, don't bother to read the rest of this article because I'm going to tell you how reasonably priced tuna is as a food and how it fills so many of your nutritional requirements. But there is no use trying to tell a person how fine a buy a food is and how good it is for the whole family if the person doesn't like the flavor, aroma, and appearance of the food.

If you have any of the can of tuna left on the plate when you finish reading this article I'll be surprised. Tuna doesn't need to be sold. It will sell itself to any customer who will take a bite of it. And the best way to eat tuna is cold, fresh out of the can, with no garnishment of any kind. Just a few crackers and some coffee and you've got a thoroughly satisfying lunch.

The rich nutritional qualities of tuna are no accident. The ocean carries in solution all of the elements that compose the earth's crust. The trace elements are there in abundance just as are all the elements which occur in the soil. Nothing that is needed to support life is absent from ocean water.

THE soil can become exhausted by heavy cropping. Some soils are naturally deficient in certain elements and the livestock that is fed on the forage produced in such soils are deficient in these nutritional aspects also—as are the people who live there if they do not bring in other food from the outside.

Very tiny quantities of certain of these elements are needed in the human diet, but if they are not there the body suffers. Iodine is necessary to the normal functioning of the thyroid gland. Without traces of manganese in the diet the body simply doesn't grow. Insulin, the hormone of the pancreas gland which prevents diabetes, requires the presence of tiny quantities of zinc in the diet. Without traces of copper in the diet the body cannot convert the simple salts of iron into hemoglobin, which is the red of the blood's red corpuscles which carry oxygen through the body. Of course, the iron has to be present in the food also. Traces of fluorine are needed

• by DR. W. M. CHAPMAN

(Director of Research, American Tunaboat Association)

in the diet, too, for proper tooth and bone building. Some of the vitamins essential to man's diet contain sulphur in their molecules, as does the amino-acid methionine which is essential to man. Potassium and magnesium function in the formation of nearly every cell in the human body. The list could be lengthened.

All of these mineral elements are present in canned tuna and always will be because tuna cannot overgraze their pastures and exhaust the resources upon which they feed. The sub-surface waters of the ocean are quite truly inexhaustible reservoirs of all the elements needed for life. In these depths where sunlight does not penetrate these elements do not get used up by living things, and the reservoir is continually being added to by the rain of elements returning to the depths as a result of the death and disintegration of the myriad swarms of tiny living things in the surface layers of the sea.

The treasures of this vast reservoir become useable only when they come near enough to the surface that the plants of the sea, which must have sunshine to help them convert elements into food, can get hold of them. This is the function of the ocean currents. Where two currents going opposite directions in the ocean rub against each other there often is upwelling of the food-rich sub-surface waters. Where an ocean current rubs up against a continent or an island there is also upwelling and turbulence which brings the food-rich waters from the depths up within reach of the microscopic plants that must live where the sun can reach their busy cells.

WHERE those areas of upwelling occur you will always find an abundance of plant and animal life. There is where the great swarms of fish schools occur. And there is where all the elements found in the vast reservoirs of the deeps are put into a form which can be used as food by man. Wherever you find upwelling in the warmer waters of the world's oceans—whether off the beach or two thousand miles from any point of land—there you find tuna.

Tuna are at the top of the ocean's food chain. They are the voracious, swift-swimming hunters of the warm seas of the world. They eat nearly any animal that swims or floats in the oceans where they live. Nothing is fast enough to escape them. Since the resources of the deep are inexhaustible, since they furnish every element necessary to the body's growth, and since tuna feed on such a wide range of the ocean's living produce, it is no wonder and should be no source of mystery that the nutritional chemists of the National Canners' Association have found such a wide range of necessary food elements in the canned tuna of commerce.

The human body needs more than minerals upon which to exist, however. Besides these mineral elements in the diet, the body must have proteins, carbohydrates, fats and vitamins in order to grow and be healthy. Let us see how canned tuna stacks up with other foods in these regards.

The general usefulness of food to the body is ordinarily measured by the number of calories available in the food. Canned tuna is a particularly calory-



Prominence

Large display stacks are instrumental in selling tuna, by attracting the eye of the shopper.

rich food. The scientists of the National Canners' Association found the following calories per pound of several typical canned foods:

Tuna	1180
Roast Beef	980
Chicken	870
Diced Pork	660
Diced Beef Liver	570

This is more or less related to the amount of total solids in the food and here again canned tuna rates exceptionally high, having 45 percent total solids, as against 40 percent in beef, 38.1 in

(Continued on page 20)



Cooking

Cooking is also all-important factor. Expert cookery aids flavor of fish.

Death Throes of an Industry

WHILE the continued floods of Japanese and other foreign raw and frozen fish has idled very nearly the entire Southern California tuna fleet, and brought to a halt, as of October, the activities of 79 huge clippers, representing \$53,000,000 worth of industry, the situation, appalling though it may be, represents only one facet of the actual loss in industry revenue.

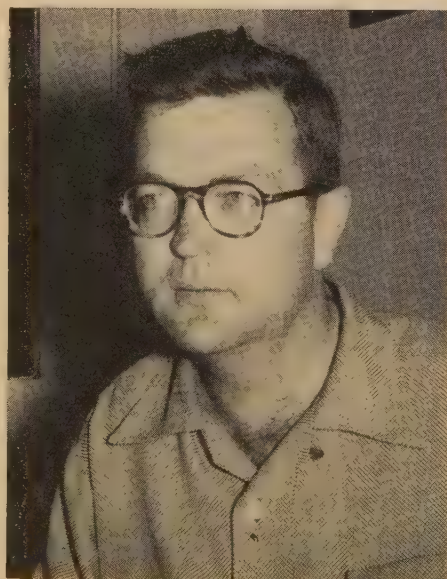
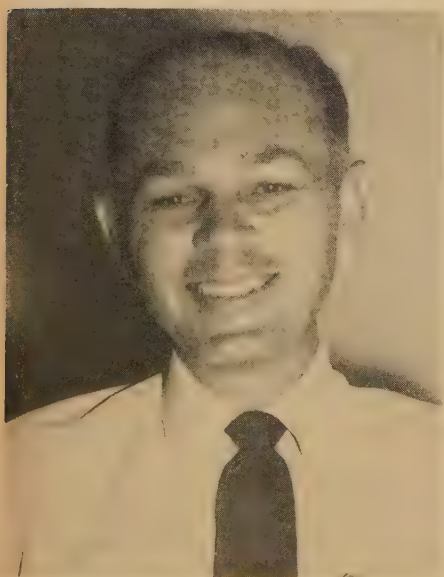
Involved in the decline, and, in some cases the actual cessation of all but the most limited operations, are the myriads of small businesses, or industry "fringe" enterprises. These include ship chandlery, oil depots, grocery supply houses, among many others. A good example of what this means is seen in the cases of Walter Atwell, President of Atwell Supply Company; and in the case of Pete Bullen, President of Drake & Bullen, both of San Diego, California, and both, up until several months ago, operators of successful and financially healthy ships chandlery.

Continuing the story
of the stricken tuna
industry of San
Diego, California.

by **JOHN
SPRINGER**

ATWELL, formerly a salesman, had built, prior to August, 1951, a startlingly good business from scratch, and in a short time. This took, as any businessman familiar with beginning a business on a shoestring and building it up, long hours of back-breaking labor. Atwell, personable and well-liked in fleet circles, possessed, at the inception of his business, no fortune to carry him through until the going got easier. Therefore, he was faced, so to speak, with the prospect of doing the job of three men, or failing to put it over. How well he did this job is illustrated by the fact that, before Japan and other foreign countries were allowed to virtually bankrupt the Southern California tuna fleet, his salesman roamed the waterfront, his warehouse was full of busy and well-paid employes, and he was getting clear of debt while, at the same time, he was building a substantial inventory. Then came the blow-off.

"I am working nothing but a skele-
(Continued on page 22)



The "Fringe"

Allied business men such as James Shreve (left), John Hays (center) and Walter Atwell have suffered crippling losses due to tie-up.

WHEN E. H. Carruthers who, at 47, as President of E. H. Carruthers Company, Warrenton, Oregon, and one of the country's outstanding mechanical engineers, was six years old, his father, a quiet, scholarly man, was certain that one day the boy would shine in the industrial world as a building wrecker. Indicative of this was the fact that nearly everything of a mechanical nature, and of any value at all, had long ago been placed beyond the reach of young Carruthers' inquisitive, and often damaging hands. Nothing fascinated him more than the ticking of a clock, or the hum of an automobile motor, and, given a few moments alone with either a clock or a sewing machine, usually meant the dissembling of such in a manner that meant pure and unadulterated catastrophe.

Cornell University, he graduated from the latter with a degree of Mechanical Engineering, and set out to put it to use.

Born in Astoria, Oregon, and raised in an atmosphere of commercial fishing, he began to formulate plans for various types of cannery machinery, as a natural outgrowth of his familiarity with such operation. But the urge was short-lived; no ideas seemed to come out of his learning, and so, from 1929 to 1940, he worked for several eastern manufacturers. This involved doing development work, primarily on pumps, centrifuges and oil-burning furnaces. Unsatisfied with the extent of his scholastic training, however, he returned to Cornell in the Fall of 1940, where he took over as professor of the school's Engineering *curriculae*. He remained in the capacity through the Spring of 1943, although, during this time, an idea had come to his mind that something definitely was wrong with tuna canning methods.



Action
The 'Pak-Shaper' in operation.

The Carruthers

'PAK-SHAPER'

A New Machine On An Old Job

BUT the aptitude, while somewhat disconcerting in its embryonic stage, later had its points. For Carruthers today is generally credited with the invention of a machine, or machines, that has become one of the true innovations in American canning circles; the result certainly of his life-long addiction to mechanics of any and all types.

This unit is known as the "Pak-Shaper," a piece of machinery employed by many West Coast fish canners, and one which promises eventually to dress up canneries from coast to coast. Among the California users of the machine, in fact, are Van Camp Seafood Company, San Diego and Terminal Island, California; and San Diego's Westgate-Sun Harbor Company. The inception, invention and subsequent development of the units, of course, can be laid at the doorstep of Carruthers, and the current business actually got its start in 1929.

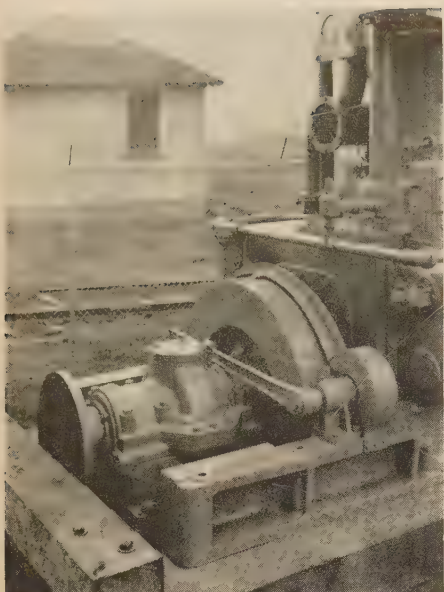
In that year, following two years of engineering at Oregon State college, Corvallis, Oregon, and several more at

THE initial idea for the "Pak-Shaper" thus got its start in 1941, when the principal parts of an experimental tuna-packing machine were developed. The idea grew slowly, as did the invention itself, and, in the late Spring of 1942, the finished machine was installed at the Columbia River Packers Association cannery in Astoria, for the purpose of making experimental runs.

From this development, thirteen machines, by July 1, 1945, were built and installed in local canneries. The first units were called "Pak-C-Lectors," and they performed in a satisfactory manner, although there were too many intricate adjustments to make them advisable for general operation. Carruthers, upon this realization, set about to work the unit over, with an eye toward simplification. The first successful production model of the present "Pak-Shaper" was installed at the Columbia River Packers plant during August. Based upon the successful operation of this unit, orders for 17 additional machines were received, among which were orders from
(Continued on page 23)



Executive
E. H. Carruthers, President, E. H. Carruthers Company, Warrenton, Ore.



Part

Thrust-bearing end.



HEN Joe S. Rogers was a youngster, fishing for a living from various small and haphazardly-equipped boats off the Coast of the United States, and, later, in Mexican and South American waters, he made up his mind one day that, if ever he became a boat owner, he would have his ship fitted with the best gear money could buy. By late October, 1951, one of the most successful clipper owners and fishermen in San Diego, California's sprawling tuna fleet, he had established a reputation for going even

Assignment **PERFOR**

further in the matter of first-class equipment. Rogers boats, indeed, are paragons of comfort, efficiency and beauty.

One of Rogers' favorite topics of conversation, aside from fishing and civic developments, is involved in good machinery, and since those far-off days, when inferior equipment caused him discomfort enough to become a sworn enemy of haywire operation, he has become an authority on many types of mechanics. Not the least of these are concerned with engines; an element that has become a decided benefit to Union Diesel Engine Company, particularly.

Rogers' contention that too little is known about Union Diesels, for a unit that, in his estimation, is as nearly perfect as can be expected, recently has brought to light a series of inquiries and other manifestations of interest that is rather uncommon for a company that has been manufacturing machinery since 1885. Not that the organization is not known and recognized and appreciated. Rogers' contention is that it is not known as extensively as it should be for the crack engine it puts out. Put it down to a "boosters" urge.

RECENTLY the owner of a huge new clipper, the *Constitution*, built by Campbell Machine Company shipyards in San Diego, Rogers personally presided over the installation of a Union Diesel after the ship was floated for the first time.

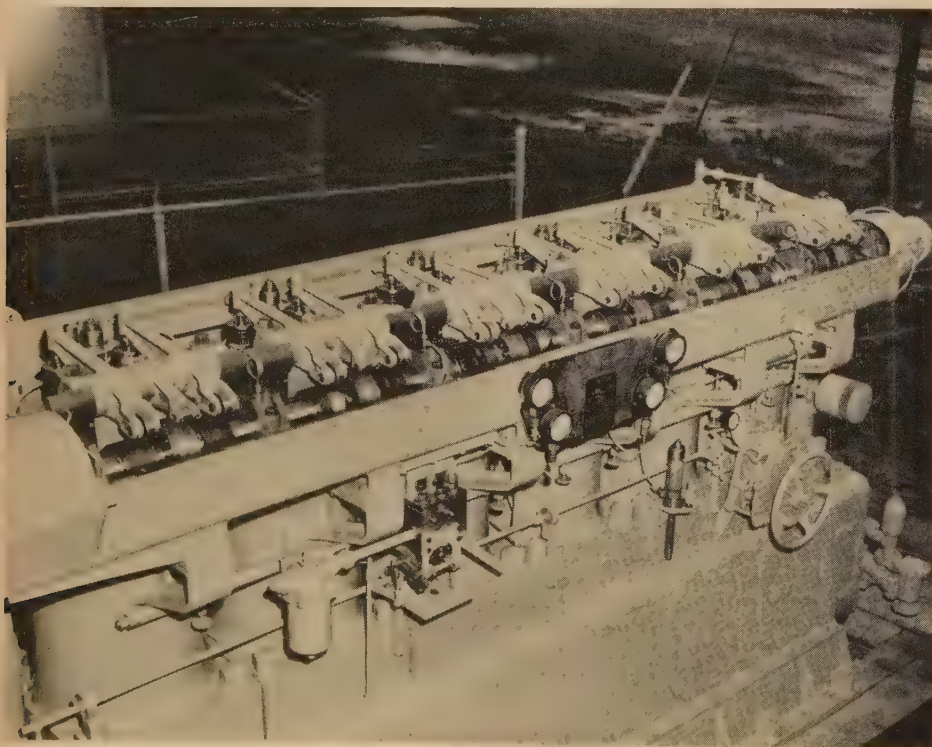
"Every time I see one of those units installed," he grinned, "I think to myself, 'there goes a ship that will get there and back'." It could be said that Rogers' appraisal of the Union Diesel is not without performance records and statistics to back it up.

The engines are of the four cycle, medium compression, mechanical injection, heavy-duty type. Fuel ignition results from the heat of compression only, and the general design, among other features, include an enclosed crankcase, individually-cast cylinders and forced lubrication. An overhead camshaft is utilized to avoid long push rods between mechanically-operated fuel injection valves and their actuating cams.

The crankshaft of the P6 Union Diesel incorporates the exclusive "Arcweb," and is machined entirely from a forging of special steel which meets the requirements of the American Bureau of Shipping, British Corporation and Lloyd's Register of Shipping. Webs and bearings are of ample dimensions, and the unit is drilled for lubrication of crank pins and piston pins by the pressure lubricating system. The crankcase forms a seating for the cylinders and is secured to the bed plate at approximately the crankshaft center line. It also features large access doors on each side.

The bed plate is of cast iron, heavy girder construction, with main bearings fitted into integral cross members. The bottom is oil tight and forms a dry sump for lubricating oil. Oil passages are through cross members into each main bearing. The through stay bolts which secure cylinders to crankcase and bed place are threaded into ample bosses adjacent to the main bearings. Precision main bearings are available in these engines, and each is lubricated from the center of each bottom half. Bored seatings in the bed plate are accurately finished to receive these shells.

THE connecting rods are machined from special steel forgings. Each is of round section with an axial hole for



Part

Top of unit, showing camshaft and valve gear.

MANANCE

pressure of the piston pin, which seats on a bronze bushing fitted upper end. Each lower end is of the marine footed type, to which is secured the crank pin bearing. Four high tensile alloy steel crank pin bearing bolts are fitted to each connecting rod. Crank pin bearings may be provided with precision type shells. Special centrifugally-cast heat-treated cylinder liners are provided, and, on the outside diameter, each is machined to assure accurate temperature control, an essential for minimum wear and greatest dependability.

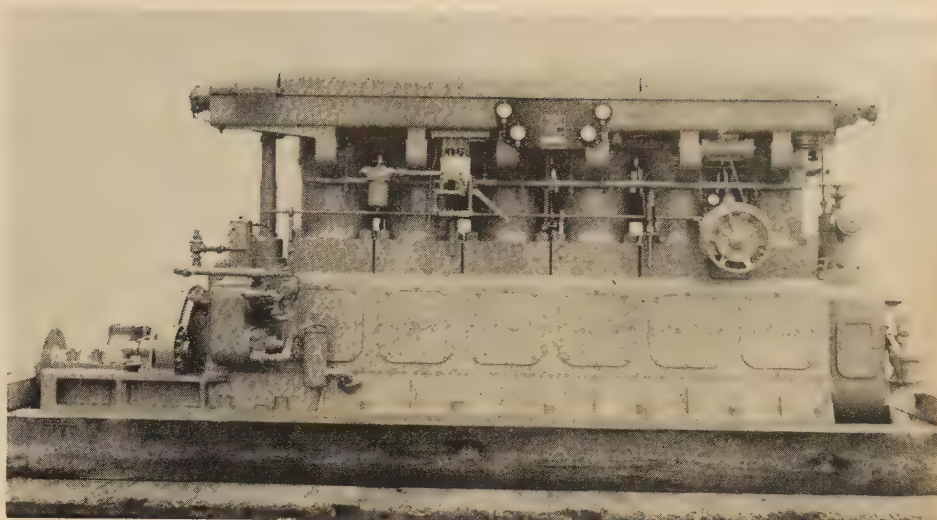
The cylinders themselves are made from individual castings of special steel and iron alloy. Adequate inspection and clean-cut holes are provided, and alloy steel cylinder head studs are fitted. Each cylinder is provided with a bored, removable, water contact type, heat-treated alloy cylinder liner, as mentioned. Pistons are oil-cooled, and each piston is of special steel, case-hardened and accurately-ground. The piston is of the full-floating type.

Valves are operated by rocker arms through hardened steel rollers and cams directly from exceptionally large diameter, sturdy camshaft as illustrated here. (This is photograph No. 3244-2). Camshaft bearings are precision type which may be installed without fitting and without use of shims. Camshaft is driven through special alloy steel gears and exceptionally rugged vertical shaft. Lower vertical shaft drive is extremely rugged with simple arrangement. Adjustments may be made without going into crank case. Inspections are readily accomplished. Experience has shown that maintenance is verily non-existent, it is so small.

A wide range of governors are available. They may be of mechanical or hydraulic construction; they may be arranged for speed regulating or over-speed control. Governor drive is individual of camshaft drive. It is through steel gears at flywheel end of engine. An exclusive Union Diesel engineering feature provides for most accurate governing at minimum maintenance cost and work.

The lubricating system is of the force-feed, pressure type. A positive displacement pressure pump forces oil to the crankshaft, connecting rods, piston pin

(Continued on page 25)



Unit
The Model "P6" Marine Diesel.

- **Union Diesel has been building machinery since 1885, and its engineers still haven't turned out a better unit than the P6**



User
Burnaby Straits, equipped with "P6" Union Diesel



MORE than 7,500 persons gathered at Harbor Drive, adjacent to the Naval training center at the end of September to watch, among other things, history rolled back more than 400 years in an extravaganza that has had no precedent in San Diego, California, entertainment circles.

The event, sponsored jointly by the Cabrillo Club, San Diego County Historical Days Association, and the Portuguese-American Civic and Social Club, ended with a big dance and entertainment at Portuguese Hall in Point Loma, California, the like of which, from a colorful and expensively-dressed affair, could only be compared with some phases of New Orleans' famed *Mardi Gras*. Plans were started, and events leading up to the actual climax, however, began months before.

THE idea had its inception when the three orders got their chief executives together and decided something substantial should be done to honor Joao Rodrigues Cabrilho, the great Portuguese sea captain, who discovered this port in 1542, and who, despite his na-



Tribute

Paying respects to the great Portuguese adventurer are (left to right, back row) Manuel Freitas, Don Robinson, Col. Ed Fletcher. Front (left to right), Joe Dryer, chairman of "Cabrillo Days," Dennis Oliver, Mayor John Butler of San Diego; and Lawrence Oliver.

History in Reverse

Cabrillo Landing Re-enacted

tionality and the correct spelling of his name, is known more familiarly as Juan Rodriguez Cabrilho."

At any rate, Cabrilho sailed into San Diego Bay on the heels of a storm in September of that year, and since he has received so little honor for his exploits that many historians consider it one of California's major historical boneheads.

Plans got underway in early August, but it was not until September that they really got rolling. That was during the time that the Boards of the three groups decided to call in one of San Diego's best Portuguese historians and give him free rein to get things underway. This gentleman was Dennis Oliver, and the outstanding job he did to make a success of the celebration is evident to San Diego today.

First, he made arrangements for Harold Peary, the original "Great Gildersleeve," and now a stage and screen star, to take the part of the gaudily-dressed Cabrilho. The choice could have hardly been more appropos. Peary is of Portuguese extraction himself, and an authority on the dress of that period.



Celebrants

Attending "Cabrillo Days" banquet, Portuguese Hall, San Diego, California, were (left to right) Manuel Simas, State President Gomes, Frank Perry, Dr. W. M. Chapman, Tony Codina, M. O. Medina, Matt Olivera, Victor Rosa.



Officials

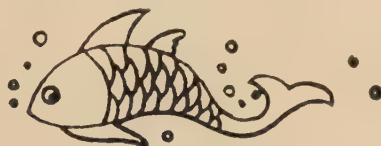
President Gomes crowns Queen Franceline Sousa at Cabrillo Day banquet, while Queen's attendants look on approvingly.

THEN Oliver appointed commercial fishing's pioneer Mathew C. Monise as Chairman of the Landing Committee. Monise, one of the most popular men on the waterfront, went to work. His first move was to arrange with National Steel & Shipbuilding Corporation for the building of two tiny ships, both replicas of Cabrilho's *Vitoria* and *San Salvador*. The jobs turned out by National caused many people to gasp in surprise. They were so perfect in design

that they probably looked more like Cabrilho's ships than did his own.

While the ships were under construction, Oliver went on with his other arrangements. These included plans for hotdog and refreshment stands in the vicinity of Portuguese Hall in Point Loma on the day designated for the landing of "Cabrilho," arrangements for a gigantic parade, complete with riding clubs, floral floats and Indians; Scouts and various city bands, and the full-dress attendance of city officials and Naval officers.

Meanwhile, the celebration led off



with the usual annual Portuguese-American Social and Civic Club banquet in El Cortez Hotel, an event that is full-dress and glittering as only a proud people demand of their social functions.

This was followed by a party of city officials and civic leaders, who within the next few days, visited the Old Spanish Lighthouse and paid honor to Cabrilho's statue. Then came the Cabrillo Club banquet in Point Loma, which was attended by some of the biggest names in the city, and in San Diego's commercial fishing industry.

THEN came the landing, on September 30, and the festivities went into their final phases.

"Cabrilho" was rowed from the two tiny ships, which had been anchored out in the bay, to shore, where he was greeted by "Indians," and where Herculano Da Silva of San Diego, taking the part of Cabrilho's Padre, offered a blessing and then presided over the making of gifts to the "Indians." Thanks to the excellent management of Chairman Mon-

(Continued on page 22)

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DANFORTH ANCHORS

TAKE TUNA!

(Continued from page 13)

chicken, 29.8 percent in beef liver, and 29.3 percent in diced pork.

Proteins are the bricks from which the cells of the body are constructed. All of these tremendously numerous proteins which occur in the body are made up of amino-acids. Nineteen of these amino-acids can be obtained from ordinary proteins and eight of these nineteen are necessary to the diet of man. The other proteins he can synthesize more or less readily if these eight essential amino-acids are present in his food.

USEABLE quantities of all these essential amino-acids are found in tuna and most of the other are found in canned tuna, also. Chemical tests show them to occur in canned tuna in just about the same proportion as they occur in beef and ham. In some cases the relative abundance is a little higher in canned tuna than in beef and ham; in other cases they are a few tenths of a percent lower in relative abundance—but they

are all present in useable quantities in canned tuna.

The total protein content of canned tuna was also found to be high. That of canned chicken was found to be 29.8 percent; of roast beef, 25 percent; of tuna, 24.4 percent; of diced pork, 21.8 percent and of diced beef liver, 21.6 percent.

Thus, tuna is a rich source of proteins and contains all of the amino-acids necessary to build the human body.

Fats are also a vital need of the human diet, and canned tuna is a relatively good source of fats, containing, upon analysis, 17.7 percent, as contrasting with the following percentage in other canned foods: Beef, 13 percent; chicken, 8 percent; diced pork, 6.5 percent and beef liver, 4.3 percent.

Everybody knows now the importance of the various vitamins in the human diet. Some of these vitamins are available in useable quantities only in fruits and vegetables. Others are available in useable quantities only in meats and meat products. Vitamin D is, of course, typically a product of fish. It first came into the human diet in fish liver oils, long before it was known that the oils were being consumed for the purpose of obtaining vitamin D. Like all fish, canned tuna is a good source of vitamin D, containing, on the average, 234 u.s.p. units per 100 grams.

Thiamine, or vitamin B1, is a vitamin necessary to the physiology of the nervous system. Of 42 canned foods tested by the National Canners' Association scientists, including a wide range of fruits, vegetables and meats, tuna stood tenth in the relative content of thiamine.

Riboflavin, or vitamin B2, is essential in the diet of human beings at all ages. Of the 42 canned foods tested in the above mentioned experiments, tuna stood seventh in the list of relative content of riboflavin.

NIACIN is also an important member of the vitamin B complex and is involved particularly in the prevention of the disease, pellagra. Of the 42 foods tested in the above mentioned experiments, canned tuna was far higher in niacin content than any other of the foods tested.

There are a number of others of the vitamin B complex which are found in useable quantities in canned tuna. For instance, canned tuna stood seventh in the list of 42 foods tested for calcium pantothenate

The practical value of all of these rather boring details about the chemical composition of tuna were well known to the human race long before chemists were even thought of. The typical diet of vast populations of humans in the Orient is composed of rice and fish. This is a well rounded and sufficient diet. Out through the islands of the Pacific the carbohydrate and vegetable vitamin part of the diet is made up of tapioca, or sweet potatoes, or taro—or whatever vegetables are available—but fish is the essential item without which life perishes. In large areas of eastern Europe, as well as of northern Europe, the main essential diets in times of food shortage and in times of dire poverty have always, in recent years, been reduced to potatoes and cabbage, on the one hand, and fish on the other.

No better example of the usefulness of fish in the human diet could be seen than in the tribes of the Solomon Islands during the war. Those tribes which lived in the mountains of the interior were skinny, had numerous deficiency diseases, and were obviously in poor condition. They had no fish in their diet and the mountains of the interior support very few animals. The natives on the coast, on the other hand, having adequate quantities of fish in their diet, were in pretty good physical shape.

If canned tuna tasted good to you,

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and if you are now satisfied that it is rich in nutritional values, let us take a look at its price. Here is a rather remarkable situation. Since 1947 the wholesale price index of all foods has gone up by 19 percent. In the same length of time the wholesale price of canned tuna has dropped by 16 percent. Almost alone among the important foods of the nation, canned tuna has been going steadily down in price in the post-war years. The reason for this is that the fleet of vessels which catch the tuna has been almost completely rebuilt and tremendously enlarged since the war, bringing added efficiency, greater volume, and consequent lowered cost to the consumer.

SINCE 1946 the consumption of canned tuna in the United States has more than doubled. These dry statistics means to the housewife that she can get canned light meat tuna at about 60 cents per pound. If she wants the scarce white meat tuna it will cost her about 37 cents for a 7-ounce can. If she wants the fancy, solid pack, selected light meat tuna, the price will run 32 or 33 cents per can. If she is economical and desires the same quality as is found in the fancy, solid pack can, but is not so particular about having large chunks of tuna, she will buy the chunk or bite-size tuna at from 25 to 27 cents per can and if she is satisfied with small pieces of tuna she will buy the grated or flake pack at 19 or 20 cents per can.

The actual consumption of tuna in this country is running approximately 30 percent grated, 35 percent chunks,

30 percent fancy, solid pack and the remainder, white meat tuna. Therefore, the average cost of tuna to the housewife is, as stated above, about 60 cents per pound on the grocer's shelf. This



pound of meat contains no bone, no skin, no fat which must be discarded, and no other waste material. The water of cooking has already been removed before the tuna goes into the can and in this process about 30 percent of the

original weight of the fish has been discarded. This the housewife doesn't pay for.

Thus, canned tuna is an exceptionally well priced food item. In fact, it is at the present time probably priced somewhat abnormally low in relation to other foods of comparable nutritional and taste value.

Hardly any meat-type food is so adaptable in the menus of an ordinary family as is tuna. It is equally good in salads, sandwiches, or mixed with any variety of other foods in hot dishes. Have you tried tuna combined with rice? Or with macaroni? Or have you spiced up the dish with the addition of cheese? Hundreds of delicious recipes for cooking tuna in all manner of combinations are available at many of the principal tuna canners.

But, if you wish to get the full taste and delight out of tuna, follow my advice.

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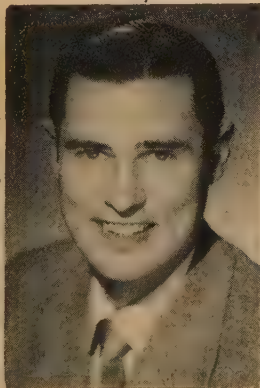
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HISTORY

(Continued from page 19)

ise, the landing also was probably as authentic as Cabrilho's original one.

At about 3 p. m., a parade got underway that stretched for more than two miles. Celebrants wound up later at Portuguese hall, where Peary put on a brilliant stage show, after which there was dancing, feasting and a general good time. Many persons since have predicted that San Diego may not see another festival of its kind so successful. These same persons, hope, naturally, that such will not be the case.

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DEATH

(Continued from page 14)

ton crew," he said in an interview with a newspaper reporter during September, "I have just added six more of my people to the rolls of the unemployed. Where, at one time, we did about \$20,000 during a given period, we are now doing \$3,000 worth of business."

Six years ago, Cecil Drake, brother-in-law of Pete Bullen, came to San Diego, California, with \$3,000, contacted Bullen and, together, they started a ships chandlery. Drake formerly was manager of an iron works in Los Angeles, and Bullen, an ex-Army officer, had been a tire company executive. Three years later, they had a going business, estimated variously at \$250,000 to \$350,000. Today, their firm has the appearance of an abandoned warehouse, despite the fact that they have had, in the past, hundreds of customers and the friendship of the fleet. Said Bullen:

"Are we worried? Of course not. We have come to the conclusion that the Japanese have us licked. We are simply going to move our business to Japan. In this manner, we'll be successful over night."

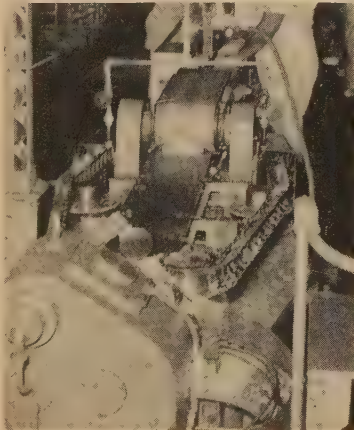
SHREVE & HAYS, Customs Brokers of San Diego, California, represented by several employes and the proprietors Jim Shreve and John Hays, once enjoyed a business thought to be around the \$20,000 figure yearly. Ninety per cent of their income is dependent upon the activities of the fleet. Today this firm, started from nothing to speak of, and built, by virtue of toil and sweat, is doing about ten per cent of its normal capacity.

"Internationalism has supplanted apparently a time-honored tradition," said Shreve. "That tradition was, at one time, 'America first.' If it's Americanism to allow an American businessman to go broke at the expense of a foreign nation, then I have lost my conception of Americanism."

John Hayes:

"Perhaps, even though our livelihood is in grave danger, we should feel thankful that we are not hit so hard as some. It is hard to see your efforts come to nothing, but maybe we are fortunate

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that we haven't lost more. It's the fisherman, in general, that I feel sorry for."

These are, of course, only remote examples, taken at random. What of the myriads of other businesses, such as neighborhood stores, and shops? What of City and County taxes, which our extremely visionary and sticky-fingered publicans are so fond of?

DEPENDANT to some extent upon the 17,000-odd people who make up the total "fringe" groups and the fishing industry itself, there are 333 stores in San Diego County in the general merchandise group, 125 limited price variety stores, 120 department and dry goods stores, 88 County and general merchandise stores, 125 jewelry stores, 794 specialty stores, 114 gift art goods stores, 111 sporting goods stores, 79 florists, 30 photographic equipment and supply firms, 37 instrument stores, 42 office, store and school supply stores, 901 grocery stores, 134 food stores, other than exclusive grocery stores, 251 packaged liquor stores, et cetera. This, to say nothing of the hardware stores, cafes, and hundreds of other businesses that are partially dependent on San Diego's \$65,000,000 yearly tuna turnover, or the millions in taxes squeezed from the industry annually.

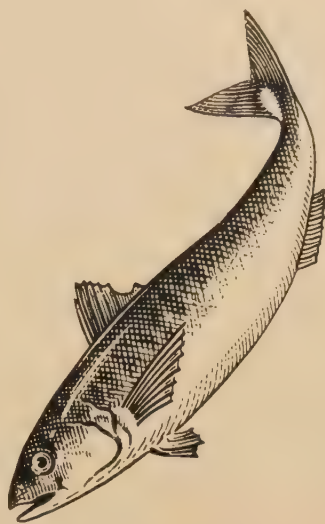
And The Congress of the United States, influenced by a purblind State Department, has allowed this industry, to go virtually bankrupt in buying the doubtful friendships of certain foreign countries!

TRUE, the subcommittee of the Ways and Means Committee may find a means of alleviating the situation before the total and utter collapse of Southern California's great fishing industry. But damage has been done that can never be repaired. Perhaps there is merit in the suggestion of the fisherman who remarked that the Un-American Activities Committee of Congress could do worse than investigate Congress and the State

Department in relation to the tariff situation involving tuna.

When the chips are down, the income lost to this area will perhaps be very nearly incalculable. A serious alarming nation economy setback has occurred; one which never has been duplicated in American history.

It cannot be repeated, as the industry, authorities agree, cannot survive a second blow of a similar nature!



'PAK-SHAPER'

(Continued from page 15)

the two California canneries just mentioned. There are now 64 "Pak-Shapers" now in the field, which means that virtually all major West Coast packers are employing them in their operation.

At present, the Carruthers organization also has another machine in production which, although similar to the "Pak-Shaper," is devoted to the packing of chunk-style tuna. This is called the "Pak-Former." The unit has not been subjected to intensified promotion

as yet for the fact that, up until a short time ago, Van Camp Seafood Company enjoyed exclusive rights of use. The Carruthers group has high hopes as to its future sale. Of course the "Pak-Shaper" remains the organization's big asset, and perhaps will continue on as such for some time, and the reason is easily seen.

THE "Pak-Shaper" among other advantages, cuts the cost of processing so substantially that, in some cases, canners refused to believe its claims until they were proven in actual operation. Among contributions to economy in utilizing the machine over the old hand-packing methods, are a saving in cannery floor space and in the acceleration of the flow of fish through processing lines. The "Pak-Shaper" in brief, works like this:

Fish loins are placed on a heavy belt, a part of the machine itself, and are transported to stainless steel forming chains. Working opposite each other,

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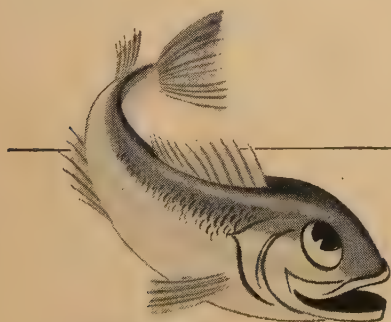
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these press the fish into a cylindrical unit, and is sliced to proper lengths and weight by a knife. This knife also ejects the slice into a can. A Geneva mechanism regulates the position of the can at various stops, and the filled tin is then carried to the cannery conveyor belt for the remainder of the processing, such as checking and oiling. The Geneva, ejecting element and the cut off are all automatically timed, and represent integral parts of the mechanism. The unit is so constructed that the machine can control the weight of the slices to within $\frac{1}{8}$ of an ounce. Operating personnel includes a worker to place the loins, as they come from the cleaning tables and cannery maintenance people to check the can weights at different intervals.

THE Carruthers organization was incorporated under the laws of the State of Oregon in August, 1945, tak-

ing over the business and assets of Eben H. Carruthers, who had operated as an individual since the Spring of 1943. Principal organizers were, in addition to Carruthers, W. E. Thomson, Vice-President, and Richard Schroeder, Secretary-Treasurer. Thomson received a M. E. degree at Syracuse University in 1926 and an LLB degree from the same University in 1934. He is in charge of contract and patent work at Carruthers. Schroeder received his B.A. degree in Business Administration in 1930, from University of Oregon, and entails application to general affairs, such as financing, purchasing, personnel and promotional activity.

The Carruthers plant and offices are represented by a new 60' x 120' concrete block building, complete with all types of basic machine tools. Currently, the firm employs fifteen people.

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National advertising of Chicken of the Sea and White Star brand tuna through the medium of television, widens the market and increases the need for more fish from the ever expanding tuna fleet.

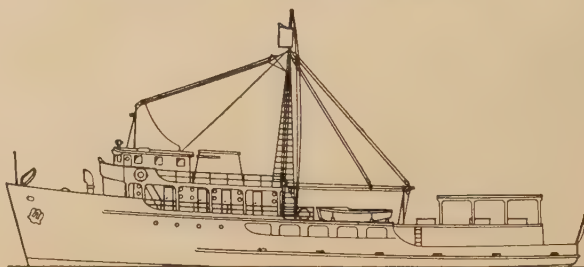
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PERFORMANCE

(Continued from page 17)

bearings, piston oil cooling, camshaft including its drive, governor and pumps. A similar sump pump removes the oil from the bed plate to an exterior service tank. To keep the lubricating oil free from grit and other objectionable foreign substances, strainer and metal-edge type filter of ample area are provided and so installed that they may be readily removed for cleaning.

BOTH lubricating oil pumps are of large size with ample volume to provide adequate oil for all engine purposes and retain bypass to assure long life. Pumps are driven from crankshaft at flywheel end independent of camshaft drive. Gears of the heat treated type rigidly supported on sturdy shafts, adequately lubricated yet readily available when desired.

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These engines are rated up to 1040 horsepower for the 8 cylinder engine, and 775 horsepower for the 6 cylinder engine with normal supercharging. Higher ratings are available with special supercharging. Reduction gear arrangements are available to suit requirements of each installation.

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sumption rates are exceptionally favorable. 4000 to 6000 horsepower hours per gallon have been frequently noted.

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EBB'N FLOW

(Continued from page 11)

ery south of Raymond. Twelve rearing ponds will be constructed there next year to supplement runs of salmon in the Willapa harbor area.

Pack:

The Puget Sound canned salmon pack, bolstered by a 55,000-case spurt on pink salmon in the week ending September 22, has passed the half-million mark with two months of fishing left.

The September 22 total stood at 580,580 forty-eight pound cases, of which 398,300 were pinks.

This compares with a 1950 pack of 384,300 cases of all species, and a pack of 686,800 cases in 1949, the last previous pink salmon producing year.

The current total includes 119,680 full cases of sockeye, the largest pack on this particular cycle since 1911. The parent year 1947 yielded less than 8,000 cases.

There were 53,613 cases of silver salmon, 6,139 of chinook and 2,820 of chum salmon in the cans September 22. Catches of chum and silver salmon will compose most of the pack during the final two months of the season.

Escapement closures imposed September 21 to protect the upriver movement of pinks to the Fraser river and Washington streams will end Sunday at Point Roberts and on fishing grounds

inside the Initiative 77 line. Rains have greatly improved spawning conditions and a field survey this week by department biologists indicates that chances of adequate seeding in most streams are now good with the major exception of the Nooksack river.

Plantings:

A record number of hatchery fish have been planted this year by the Department of Fisheries to supplement natural spawning in the state's salmon producing streams. Through September, a total of 34,140,000 fish had been liberated, the largest production since the present rearing system was started about a quarter of a century ago.

The previous record was 28,053,000 fish in 1950. The output includes the greatest number of reared fish ever produced—23,900,000, compared with the 1950 high of 17,150,000 fish. The fish were fed in concrete rearing ponds for one to 12 months, depending upon species and available space. Better survival rates and lowered pressure on the stream food supply are obtained as result of the feeding period.

A third new mark was achieved with the planting of 17,140,000 chinook salmon, an increase to six million fish over the preceding year. The state's chinook runs are the most seriously depleted and hatchery emphasis has been transferred in recent years to this species.

Silver salmon plantings totaled 2,700,000 yearlings, 3,458,000 fingerlings, and 6,237,000 fry. The state's 15 salmon hatcheries are holding additional silvers for rearing to age 12 months. Plantings of these fish next spring to some extent will offset exceptionally heavy losses of natural silvers caused by the prolonged summer dry spell. Silvers remain in the stream for approximately one year before migrating seaward. The resident period for chinooks is three to four months, while pink and chum salmon migrate soon after hatching.

Of the total plantings, 25,647,800 fish went into streams tributary to Puget Sound and the Straits of Juan de Fuca, 4,083,400 into Columbia river tributaries, and 4,409,000 into Grays and Willapa harbor tributaries.

PUBLICITY

a'la Richards:

More than \$15,000 worth of free radio, television and magazine publicity for the tuna industry resulted when Dr. W. M. Chapman spent a recent afternoon in Los Angeles at the invitation of advertising counselor, Walter "Hank" Richards. Richards, well known to San Diegans as the energetic Marine writer-producer of the radio shows, *Halls of Montezuma* and the *Marine Corps Fol-*



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lies, had called Dr. Chapman about making an appearance on a single radio broadcast on station KNX. Arriving in Los Angeles at noon he discovered, however, that Richards had lined up a whirlwind schedule. Chapman's first appearance was on American Broadcasting Company's TV station KECA, as the guest of Grace Lawson, on her famous kitchen program.

Miss Lawson, by pre-arrangement with Al Flanagan, Western TV Program Director for ABC, was devoting her entire program to tuna and already had shown her viewers how to prepare an albacore. She had it cooking when Dr. Chapman arrived. The next fifteen minutes were devoted to one of the most comprehensive reports on the current tuna crisis yet presented to the public, with Miss Lawson firing questions and Dr. Chapman masterfully answering and stating the case of the American Tunaboat Association fishermen.

During their informal chat, Miss Lawson, who is not only a graduate Doctor of Science but is a Doctor of Medicine as well, joined Dr. Chapman in covering the importance of tuna as a great nutritional dish, with emphasis on the fact that tuna is "today's great bargain" in high protein food. Miss Lawson then proceeded to demonstrate

the advantages of canned tuna as America's most versatile food.

Dr. Chapman was rushed next to radio and TV station KLAC for a recorded interview with newscaster Ed Lyon. The interview was then included in several of Lyon's radio newscasts of the day and a summary of the tuna crisis, quoting Dr. Chapman, was discussed as the highlight of Lyon's evening telecast.

Next stop was at Mutual-Don Lee studios for another recorded statement



for the coast-to-coast Mutual Newsreel program, and KHJ-TV commentator Michael Hinn devoted the major portion of his time to a review of the tuna tariff situation as it affects one of California's major industries. The offices of *Look* and *Quick* magazines were next visited, with coast editor Dan Fowler interviewing Dr. Chapman and assuring

him of editorial support. Columbia network studios were next in order. Here Dr. Chapman tape-recorded a seven minute question and answer interview with Bill Whitley for the KNX *This is Los Angeles* program, after which he was given a quizzing by CBS news analysts Ed Beck and Carol Alcott. Both commentators presented the tuna industry's side of the question on their coast-to-coast CBS broadcasts.

All in all a very busy day for Dr. Chapman and a good demonstration of the publicity possible when matters are handled by a first-class publicist, with national contacts.



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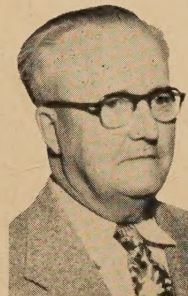
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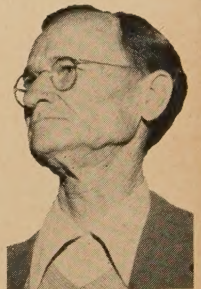
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BOATS EXCHANGED

FOR EXCHANGE OR SALE—Several different types and sizes. Write us your requirements—we always have a large number of boats available, or we will be glad to locate the exact boat you want. Write Pan-American Fisherman, P. O. Box 1, 205 Broadway Pier, San Diego.

FOR SALE—Compact 6-ton, wood hull fishing boat, 40 feet long and powered with two-cylinder Gray Marine Diesel. Has Lawson auxiliary gas engine, plus complete refrigeration. This boat may be purchased at an exceptionally low figure. Excellent operating condition. Phone F 7328 San Diego, or write Pan-American, P. O. Box 10, 205 Broadway Pier Bldg., San Diego.

BOAT SALES

BOAT BROKERS: List your boat sales each month on this page. No charge to you—listing is a service to our readers.

The following are boat sales reported by brokers in the Southern California area.

Anchorage, Ltd., 5104 Harbor Drive, San Diego, Cal. 36' Twin-speed sport boat—"Palama aKi II." Purchased by Dr. Charles Brass of Solano Beach from Frank Donahoe, of Santa Monica, Calif.

28' sport boat "Calvalier." Purchased by Bernard Johnston of El Centro, from Dave Delano and Don Seider of San Diego, Calif.

24' boat—"Nancy Ellen." Purchased by William Whitson, of San Diego, from Paul Burton, also of San Diego, Calif.

24' cabin cruiser "Lo Bo." Purchased by Henry Moore of National City, Calif., from R. A. Fechter, of San Diego, Calif.

34' Elco cruiser. Purchased by Don Dunhany, of National City, Calif., from O. C. Parsons, also of National City.

32' Marlin trawler "Rebel." Purchased by A. D. Clark, La Mesa, Calif., from Herbert Panchot, of Point Loma, Calif.

Statement of the ownership, management, and circulation required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 of Pan-American Fisherman, published monthly at San Diego, California, for 1951.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, John T. McInnis, 127 So. Olive, Orange, California; Editor, John Springer, 205 Broadway Pier Bldg., San Diego, Calif.; Business manager, John W. Sutliff, 604 Cedar St., San Diego, California.

2. Names and address of stockholders owning or holding 1 percent or more of total amount of stock are: M. O. Medina, 655 San Elijo, San Diego, Calif.; Joe M. Medina, Rm. No. 1, Broadway Pier Bldg., San Diego; Cecil W. Drake, c/o Tuna, Inc., P. O. Box 187, Moss Point, Miss.; Chas. Kaufman, 4021 Lamont, San Diego 6, Calif.; Joaquin Medina, 1140 Harbor Drive, San Diego; Cosimo A. Cutri, 1016 First Nat'l Bank Bldg., San Diego; Mathew C. Monise, Rm. No. 1, Broadway Pier Bldg., San Diego; Louis De Falco, 1703 India St., San Diego; Miller-Gresham Accounting Service, Broadway Pier Bldg., San Diego; Henry Langhorst, 2110 Belt, San Diego; Joe Silva, 3144 Byron, San Diego 6, Calif.; George and Dorothy

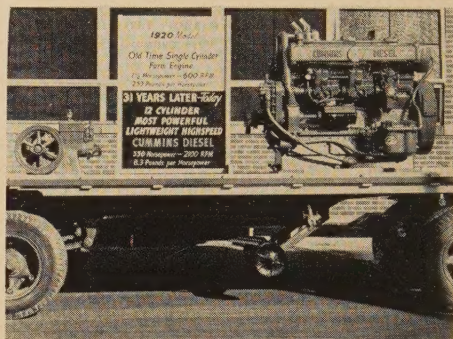
Soares, 3354 Trumbull, San Diego 6; Guy Silva, 1003 W. Brooks, San Diego; Joe Gaspar, 3222 Lowell, San Diego 6; John T. McInnis, 127 So. Olive, Orange, Calif.; J. A. Donnelley, 1403 Bank of America Bldg., San Diego; John W. Sutliff, 604 Cedar Street, San Diego; Alma A. Sutliff, 604 Cedar Street, San Diego.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

JOHN SPRINGER, Editor-in-Chief

Sworn to and subscribed before me this first day of October, 1951. Horace L. Miller, Notary Public (Seal) (My commission expires September 19, 1952).



THEN—AND NOW

"Pioneer Days" were recently celebrated in Columbus, Ind., under the auspices of the Columbus Chamber of Commerce. Changes in the Cummins Diesels during the last 31 years were featured on a float entered by the Columbus Engine Co., Inc. The old time single cylinder diesel farm engine was displayed along with newest Cummins Engine—550 horse lightweight diesel now in production at Cummins plant.

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Compact 6-ton, wood hull fishing boat, 40 feet long and powered with two-cylinder Gray Marine Diesel. Has Lawson auxiliary gas engine, plus complete refrigeration. This boat may be purchased at an exceptionally low figure. Excellent operating condition. Phone F 8328 San Diego, or write Pan-American, P. O. Box 10, 205 Broadway Pier Bldg., San Diego.

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